



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,825	10/20/2005	David Edwin Thurston	065435-9048-US00	8880
23510	7590	03/02/2007	EXAMINER	
MICHAEL BEST & FRIEDRICH, LLP			KIFLE, BRUCK	
ONE SOUTH PINCKNEY STREET			ART UNIT	PAPER NUMBER
P O BOX 1806			1624	
MADISON, WI 53701				
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE		DELIVERY MODE	
3 MONTHS	03/02/2007		PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/534,825	THURSTON ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Bruck Kifle, Ph.D.	1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 07 December 2006.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-6,8 and 10 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-6,8 and 10 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

Applicant's amendments and remarks filed 12/07/06 have been received and reviewed.

Claims 1-6, 8 and 10 are now pending in this application.

***Claim Rejections - 35 USC § 112***

Claims 1-6, 8 and 10 are again rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- i) Claim 1 is still not written in proper Markush form. The term "and" should be replaced by "or" to be in the alternative form. Thus, the third line, the phrase "and pharmaceutically acceptable salts, solvates or prodrugs" needs to be presented using alternative language, such as, "or a pharmaceutically acceptable salt, solvate or prodrug."
- iv) The nature of the prodrugs is not known. One skilled in the art cannot say what derivative results in a prodrug and which one does not. Arriving at a given prodrug of a pharmaceutical is not routine, but requires research. To require research to understand the scope of a claim is improper. Applicants argue that the specification at page 26, line 34 to page 28, line 5 describe the intended prodrugs. In these lines and reference, mere examples have been recited. Is Applicants intention to define prodrugs as these derivatives or is more intended? If more is intended, what do these additional prodrugs look like?
- v) The term "substituted" without saying which substituents are intended is indefinite. One skilled in the art cannot say which substituents are permitted and which ones are not. Applicants have not addressed this rejection and it remains.
- vi) The group "C<sub>3-20</sub> heterocyclyl" is indefinite because a heterocyclic group necessarily requires the presence of a heteroatom and cannot be made solely of carbon atoms. It is not known how

many atoms make up the ring, which atoms are present and what kind of a ring (monocyclic, bicyclic, spiro, fused, bridged, saturated, etc.) is intended. Applicants point to page 7, line 9 to page 8, line 17 of the specification. While these lines define the size of the ring, the nature of heteroatoms involved is not present.

vi) The group C<sub>5-20</sub> aryl" group is improper. There are no C<sub>5</sub> or C<sub>7</sub> aryl groups. Applicants intention may be a phenyl or naphthyl group, which is not reflected by the claim language. Again, the specification does not say which heteroatoms are permitted.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6, 8 and 10 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Thurston et al. (WO 00/12508). The basis of this rejection is the same as given in the previous office action and is incorporated herein fully by reference. The reference teaches a generic group of compounds which embraces applicants' claimed compounds (See pages 2-4, compounds of formula (I) and definitions for A (as a single bond) and R (as aryl) groups). The claims differ from the reference by reciting specific species and a more limited genus than the reference. That is, the claims limit instant R<sup>2</sup> to optionally substituted naphthyl, thiophenyl, furanyl and a substituted phenyl group. The closest prior art compounds have either a methoxy substituted phenyl or a phenyl group that corresponds to instant R<sup>2</sup>. Instant R<sup>2</sup> groups are aryl groups.

It would have been obvious to one having ordinary skill in the art at the time of the invention to select any of the species of the genus taught by the reference, including those

instantly claimed, because the skilled chemist would have the reasonable expectation that any of the species of the genus would have similar properties and, thus, the same use as taught for the genus as a whole. One of ordinary skill in the art would have been motivated to select the claimed compounds from the genus in the reference since such compounds would have been suggested by the reference as a whole. It has been held that a prior art disclosed genus of useful compounds is sufficient to render *prima facie* obvious a species falling within a genus. *In re Susi*, 440 F.2d 442, 169 USPQ 423, 425 (CCPA 1971), followed by the Federal Circuit in *Merck & Co. v. Biocraft Laboratories*, 847 F.2d 804, 10 USPQ 2d 1843, 1846 (Fed. Cir. 1989).

Therefore, in the absence of a showing that the instant compounds demonstrate unexpected and unobvious results over the closest prior art compounds taught by the reference, the claims are deemed obvious over Thurston et al. (WO 00/12508). Applicants must prove that their compounds possess a property that the prior art compounds do not possess, nor is it disclosed to possess. *In re Dillon* (16 USPQ 1897) states “the discovery that a claimed composition possesses a property not disclosed for the prior art subject matter does not by itself defeat a *prima facie* case.”

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 40 of U.S. Patent No. 7,049,311. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are embraced by the patented claims. The instant claims limit R<sup>2</sup> to optionally substituted naphthyl, thiophenyl, furanyl and a substituted phenyl group. The patent has R<sup>2</sup> as aryl. One of ordinary skill in the art would have been motivated to select the claimed compounds from the genus in the patent and arrive at the instant claims.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruck Kifle, Ph.D. whose telephone number is 571-272-0668. The examiner can normally be reached Mondays to Fridays between 8:30 AM and 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bruck Kifle, Ph.D.  
Primary Examiner  
Art Unit 1624

BK  
February 23, 2007